



[0001] SYSTEMS AND METHODS FOR EXPEDITING THE IDENTIFICATION  
OF PRIORITY INFORMATION FOR RECEIVED PACKETS

[0002] TECHNICAL FIELD

[0003] The present invention relates generally to communication systems and methods  
5 and, more particularly, to systems and methods for facilitating the identification of priority  
information and corresponding priority queues for packets received by a network device.

[0004] BACKGROUND ART

[0005] In computer networks, a number of network stations are typically interconnected  
via a communications medium. For example, Ethernet 802.3 is a commonly used local area  
10 network (LAN) scheme in which multiple stations are connected to a shared or dedicated serial  
data path. These stations often communicate with a switch or some other network device  
located between the data path and the stations connected to that path. The switch typically  
controls the communication of packets and includes logic for receiving and forwarding packets  
to their appropriate destinations.

15 [0006] Some conventional network switches provide different classes of service for  
packets they route. The particular class of service to be provided to a packet may be identified  
within the header of the packet. The switch typically uses the identified service class in  
determining how to route the packet.

20 [0007] Conventional network switches sometimes include priority queues that buffer  
information for packets that await transmission from the switches. The switches usually  
include priority queues of a few priority levels, such as high and low priority levels. The  
switches must, therefore, map the identified service class of a packet to the few priority levels  
supported by the switches. The network switches typically use time-consuming processes to  
25 identify the priority queues within the switches to receive packets of particular classes of  
service. For example, the network switches may carry out the lookup of the priority  
information from the packet in software, which is time consuming typically performed for  
priority information not available at the layer 2 header on the packet.

[0008] DISCLOSURE OF THE INVENTION

30 [0009] There exists a need for systems and methods that facilitate the identification of  
priority levels and priority queues for received packets. Systems and methods consistent with  
the present invention address this and other needs by using programmed priority level